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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,461	03/04/2002	Robert Sultan	FJPR-187XX	3317
207	7590	01/05/2006	EXAMINER DYKE, KERRI M	
WEINGARTEN, SCHURGIN, GAGNEBIN & LEOVICI LLP TEN POST OFFICE SQUARE BOSTON, MA 02109			ART UNIT 2667	
PAPER NUMBER				

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/090,461	<b>Applicant(s)</b> SULTAN ET AL.	
	<b>Examiner</b> Kerri M. Dyke	<b>Art Unit</b> 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/11/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abu-Amara et al. (US 5,914,945) in view of Hluchy et al. (US 5,426,640) further in view of "Edge Closed User Groups" (provided by applicant).
3. In regards to claims 1 and 8, Abu-Amara discloses a method (and network) of providing transparent local area network (LAN) service in a ring network (column 3 lines 30-34 discloses the method and system as applicable in an optical network, which is inherently capable of being configured into a ring topology), comprising: allocating respective proportions of data transmission capacity of the ring to different user groups (column 4 lines 41-42), each user group including a corresponding plurality of LAN clients of the transparent LAN service (it is inherent that each group will be comprised of a plurality of LAN clients). Abu-Amara does not disclose at each of a plurality of network devices attached to the ring: (1) monitoring the use of a connected segment of the ring for both pass-through and locally-generated traffic by the LAN clients on a per-CUG basis; and (2) upon detecting that use of the connected segment for a given CUG is approaching the proportion of ring data transmission capacity allocated to the CUG, selecting an active one of the LAN clients of the CUG and sending a throttle message to the

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selected LAN client, the throttle message indicating that the LAN client is to reduce its data transmission rate.

Hluchyj discloses monitoring the traffic based upon the group it belongs to in column 4 lines 38-42. If a group is found to be approaching or exceeding its capacity allotment a message is sent to reduce data transmission (column 4 lines 55-56).

It would have been obvious to one of ordinary skill in the art to use Hluchyj's monitoring/enforcement method within Abu-Amara's network because Hluchyj's method has several advantages including providing a greater scope of action, congestion tracking at each intermediate node, and rate adjustment only of violators, as disclosed in column 3 line 43 – column 4 line 12.

Both Abu-Amara and Hluchyj disclose tracking the connections based upon groups, but neither discloses the groups being closed user groups.

“Edge Closed User Groups” (ECUG) discloses creating CUGs within a network.

It would have been obvious to one of ordinary skill in the art to use CUGs within the network described by Abu-Amara and Hluchyj because CUGs provide a greater level of security, as taught by “Edge Closed User Groups.”

4. In regards to claims 2 and 9, Abu-Amara, Hluchyj, and ECUG disclose a method according to claims 1 and 8, wherein the monitoring for each CUG comprises: maintaining a set of buffers for traffic of the CUG and removing traffic from the buffers at a predetermined aggregate rate corresponding to the proportion of ring data transmission capacity allocated to the CUG (Hluchyj discloses using a leaky bucket in column 5 lines 54-57); and continually

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determining whether the occupancy of the buffers exceeds a predetermined threshold (Hluchyj discloses using thresholds in column 6 lines 50-51 and figure 2).

5. In regards to claims 3 and 10, Abu-Amara, Hluchyj, and ECUG disclose a method according to claims 1 and 8, wherein the selecting for each CUG comprises: maintaining a rate cache identifying active sending ones of the LAN clients of the CUG and corresponding rates at which the active LAN clients are sending traffic; and selecting from among the active LAN clients identified in the rate cache according to a predetermined selection criteria. Hluchyj figures 6-7 and column 8 line 20 – column 9 line 62 discloses monitoring each client and selecting one for rate reduction if necessary.

6. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abu-Amara et al. (US 5,914,945) in view of Hluchyj et al. (US 5,426,640) further in view of “Edge Closed User Groups” (provided by applicant) further in view of Hahne et al. (US 5,014,265).

7. In regards to claims 4 and 11, Abu-Amara, Hluchyj, and ECUG disclose a method according to claim 3, but not wherein the predetermined selection criteria includes successively rotating among the identified active LAN clients.

8. Hahne discloses successively rotating through clients in column 1 lines 49-65.

9. It would have been obvious to one of ordinary skill in the art to rotate through the clients as taught by Hahne because doing so allows for a more fair and equitable distribution of access to resources, as taught by Hahne in column 1 lines 49-65.

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10. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abu-Amara et al. (US 5,914,945) in view of Hluchyj et al. (US 5,426,640) further in view of “Edge Closed User Groups” (provided by applicant) further in view of Chrysos (US 2001/0014928, provided by applicant).

11. In regards to claims 5 and 12, Abu-Amara, Hluchyj, and ECUG disclose a method according to claims 1 and 8, but not wherein the CUGs are first-type CUGs receiving guaranteed delivery service, and further comprising, at each of the plurality of network devices: monitoring the fullness of a set of buffers for traffic of second-type CUGs receiving best-effort service; and upon detecting that the fullness of the buffers exceeds a predetermined threshold, selecting an active one of the LAN clients of one of the second-type CUGs and sending a throttle message to the selected LAN client, the throttle message indicating that the LAN client is to reduce its data transmission rate.

Chrysos discloses having high-priority and low-priority operations and inhibiting the low priority operations if more resources are needed for the high-priority operations in paragraph 5.

It would have been obvious to one of ordinary skill in the art to inhibit lower priority clients before higher ones, as taught by Chrysos because higher priority clients are by definition viewed as being more important and need preferred access to resources.

12. Claims 6-7 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abu-Amara et al. (US 5,914,945) in view of Hluchyj et al. (US 5,426,640) further in view of “Edge Closed User Groups” (provided by applicant) further in view of Kalkunte et al. (US 6,118,761).

13. In regards to claims 6 and 13, Abu-Amara, Hluchyj, and ECUG disclose a method according to claims 1 and 8, but not wherein the throttle message comprises a pause message, and wherein the selected LAN client responds to the pause message by temporarily ceasing its data transmission.

Kalkunte discloses that sending a pause message is well known in column 1 lines 57-60.

It would have been obvious to one of ordinary skill in the art to use a pause message and taught by Kalkunte in the method of Abu-Amara, Hluchyj, and ECUG, because doing so would prevent buffer overflow and network overload, as disclosed by Kalkunte in column 1 lines 49-51.

14. In regards to claims 7 and 14, Abu-Amara, Hluchyj, and ECUG discloses a method according to claims 1 and 8, but not wherein the throttle message indicating that the selected LAN client is to reduce its transmission rate by a predetermined amount specified by the throttle message.

Kalkunte discloses sending a rate reduction message to each client in column 2 line 51 – column 3 line 18.

It would have been obvious to one of ordinary skill in the art to use Kalkunte's rate reduction message within the network of Abu-Amara, Hluchyj, and ECUG because doing so would allow the congestion to be relieved while minimizing the effect on each flow, as taught by Kalkunte in column 2 line 51 – column 3 line 18.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pajuvirta et al. (US 5,889,762), Worster (US 5,418,777), and Bakshi (6,970,425) each disclose techniques for rate monitoring and control.


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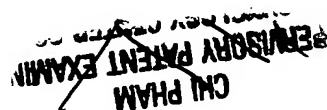
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Dyke whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Friday, 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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